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| 10/526,801 | 10/21/2005 | Santiago Miguel Sanz | TJA-112US | 7391 |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/526,801

Applicant(s)

MIGUEL SANZ ET AL.

Examiner

DENNIS HOGUE

Art Unit

2622

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 41-84 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 41, 42, 44-47, 49-62 and 67-84 is/are rejected.
- 7) ☒ Claim(s) 43, 48 and 63-66 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3/7/2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This is the initial Office Action based on the 10/526,801 application filed 3/7/2005. Claims 41-84, as originally filed, are currently pending and have been considered below. Claims 1-40 have been cancelled.

Remarks

2. The examiner has made several rejections of claims under USC 112 2nd paragraph as indefinite. In the examiner's opinion, it will likely not be possible to overcome some of these rejections because the indefinite clauses are word for word from the specification (that is, the specification is no more clear than the claims). However, some of the rejections under USC 112 could be overcome by deleting the indefinite clauses. The applicant should use caution to avoid introducing new matter that is not fully supported by the specification if amending the claims to address USC 112 issues.

Claim Objections

3. Claim 41 is objected to because of the following informalities: "... at least one device protecting it..." should be changed to "... at least one protection device protecting it..." to be more clear and consistent with the language of claims 42 and 43. Appropriate correction is required.

4. Claim 42 is objected to because of the following informalities: the language "which is at least one" does not appear to further limit the claim in any meaningful way. Appropriate correction is required.
5. Claim 68 is objected to because of the following informalities: "comprising" should be changed to "comprises". Appropriate correction is required.
6. Claim 74 is objected to because of the following informalities: "consisting said window of" should be changed to "said window consisting of". Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
8. Claims 46 and 47 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The examiner cannot parse the claim language after "including" in either of these claims. They are extremely unclear. Claims 59-62 and 80-83 depend from these claims and are rejected for the same reason.
9. Claims 60 and 81 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The examiner cannot determine the scope of the

language "said releasable fixation means... include form fitting fixation configurations."

How can a means be an abstract concept such as a configuration?

10. Claims 67 and 84 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The language "some of the more protruding zones" is vague and makes it impossible to determine the scope of the claim. Is "some" one, two, or something else? What is meant by "more protruding"? The examiner does not understand what is meant by the language "at a certain distance of a plan in which the window is disposed not less than the window diameter".

11. Claim 69 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The clause "being an annular elastic sealing element embracing both continuous flanges and covering said joint" is unclear because it is unclear as to what claim element it is modifying. What is being an annular elastic sealing element, is it the concave halves, the continuous flanges, or the perimetral borders? Based on the specification, it appears that none of these are being an annular elastic sealing element. Rather it appears that there is a separate annular elastic sealing element. For the purposes of examination, this clause is ignored in this office action. Claims 70 and 71 depend from this claim and are rejected for the same reason.

12. Claim 72 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The clause "including said appendix an internal screw thread

to which the optical system is screw coupled” is grammatically incorrect and the examiner cannot determine the intent of this clause. Claims 73-79 depend from this claim and are rejected for the same reason.

13. In summary, claims 46, 47, 59-62, 67, and 69-84 are rejected under USC 112 2nd paragraph.

Claim Rejections - 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

15. Claims 41, 42, 44, 45, 49, 50, 57, and 68-70 are rejected under 35 U.S.C. 102(e) as being anticipated by Bingle et al. (US PGPub 2006/0171704).

Regarding claim 41, Bingle et al. teach an image acquisition module for monitoring applications of the external surroundings of a vehicle (imaging system for a vehicle, see title, abstract), comprising: a housing with an interior protected against at least moisture (camera module 10 comprises plastic camera housing 11 having portions

that are laser welded or sonic welded together to seal the housing 11 to prevent water intrusion, par. 70) and a window hermetically closed by a transparent element (cover portion 20 of housing 11 comprises a transparent cover plate 22, par. 71; the housing 11 is hermetically sealed, par. 81, 84); an electronic circuit accommodated in said housing and associated with connection means with the exterior, for supply and/or bidirectional signal exchange (housing 11 comprises an image sensing device 18 connected to a circuit board 26, par. 71, 77; the image sensor connects to other circuitry through multi-pin connector 14a, par. 82); an image detector connected to said electronic circuit and opposed to said window (housing 11 comprises an image sensing device 18 connected to a circuit board 26, par. 71, 77; transparent cover plate 22 allows the image of the scene to pass therethrough and into housing 11 to camera 18, par. 71); a support attached to the housing to carry an optic system between said image detector and said window (lens system 24 is positioned within cylindrical portion 12a of camera portion 12 so as to receive light from cover 22, par. 78); and positioning means and releasable fixation means to enable at least the focusing of said optic system (lens system 24 functions to focus the image onto sensor 18, par. 77-78) and the releasable fixation of the module to an external structure of a vehicle (mounting tabs 14f are used to attach the camera unit to the vehicle via fasteners, par. 81), wherein said window is associated with at least one device protecting it from external agents and from a luminous incidence, providing an appropriate light pass through said transparent element (the transparent cover plate 22 is associated with camera housing 28 which functions to substantially prevent or limit incident light from being received by camera 18

and interfering with the image received by camera 18 through transparent cover plate 22 and lens system 24, par. 78; the transparent cover plate 22 is associated with heating device 30 which defrost and defog the transparent cover plate, par. 71, 77, 86-89).

Regarding claim 42, Bingle et al. teach the module according to claim 41, wherein said protection device, which is at least one, comprises a visor element disposed around at least a part of said window (the transparent cover plate 22 is associated with camera housing 28 which functions to substantially prevent or limit incident light from being received by camera 18 and interfering with the image received by camera 18 through transparent cover plate 22 and lens system 24, par. 78).

Regarding claim 44, Bingle et al. teach the module according to claim 41, wherein said window or said support are, furthermore, associated with conditioning means of the light pass conditions through said transparent element (the transparent cover plate 22 is associated with heating device 30 which defrost and defog the transparent cover plate, par. 71, 77, 86-89).

Regarding claim 45, Bingle et al. teach the module according to claim 44, wherein said conditioning means comprise an electric heater device associated with said transparent element and/or with said optical system and being supplied from said connection means with the exterior (the transparent cover plate 22 is associated with heating device 30 which defrost and defog the transparent cover plate, par. 71, 77, 86-89; power is supplied to the heating device 30 through heating terminals 30a and 30b, par. 86, 88).

Regarding claim 49, Bingle et al. teach the module according to claim 41, wherein said connection means with the exterior, for the supply and/or for bidirectional signal exchange, are linked to an exterior multiple connector (the image sensor connects to other circuitry through multi-pin connector 14a, par. 82).

Regarding claim 50, Bingle et al. teach the module according to claim 49, wherein said exterior multiple connector is incorporated into the housing (the image sensor connects to other circuitry through multi-pin connector 14a, par. 82).

Regarding claim 57, Bingle et al. teach the module according to claim 41, wherein said image detector is part of an integrated circuit (the image sensor is a CMOS or CCD image sensor, par. 72).

Regarding claim 68, Bingle et al. teach the module according to claim 41, wherein said housing comprising two concave halves with respective perimetral borders opposed to each other and back-to-back throughout a joint (casing 16 comprises a pair of casing portions 16a, each of which partially encases about half of the camera module 10 and partially overlaps the other portion 16a, par. 92; see Fig. 3).

Regarding claim 69, Bingle et al. teach the module according to claim 68, wherein said concave halves are provided with respective continuous flanges extended externally and adjacent to said perimetral borders (each of the casing portions 16a partially overlaps the other of the casing portions 16a to substantially encase the plastic housing within protective shield 16, par. 92), being an annular elastic sealing element embracing both continuous flanges and covering said joint (the clause "being an annular elastic sealing element embracing both continuous flanges and covering said joint" is

unclear because it is unclear as to what claim element it is modifying, see the rejection above under the USC 112 section; therefore, for the purposes of examination in this office action, this clause is ignored).

Regarding claim 70, Bingle et al. teach the module according to claim 69, wherein in a part of at least one of said perimetral borders there is a recess to provide an exit for a multicore wiring (see Figs. 3 and 8; the seam of casing 16 is interrupted where the connector portion 14 extends; the connector portion is for receiving a multipin connector of a multiconductor cable, see Fig. 8).

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claims 51-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bingle et al. (US PGPub 2006/0171704) in view of Kameyama (US PGPub 2002/0126457).

Regarding claim 51, Bingle et al. teach the module according to claim 49. However, Bingle et al. do not teach wherein said exterior multiple connector is disposed at the end of a multicore wiring.

Kameyama teaches a camera module for use on a vehicle wherein the camera module comprises an exterior multiple connector disposed at the end of a multicore wiring (wiring harness 4 is connected to non-waterproof connector CR3, see Fig. 1, par. 124-128; the wiring may be a ribbon cable or a flexible printed circuit, par. 126). Using a multicore wiring to electrically connect the camera to the vehicle increases the flexibility of the camera device in that the camera device does not have to be mounted at the location of connector CR3.

Therefore, it would be obvious to one of ordinary skill in the art to combine the multicore cable of Kameyama with the camera device of Bingle et al. so that the camera could be mounted at locations other than where connector CR3 is located. This would increase the utility of the user.

Regarding claim 52, Bingle et al. in view of Kameyama teaches the module according to claim 51, wherein said multicore wiring has the form of a flat tape (wiring harness 4 is connected to non-waterproof connector CR3, see Fig. 1, par. 124-128; the wiring may be a ribbon cable or a flexible printed circuit, par. 126).

Regarding claim 53, Bingle et al. in view of Kameyama teaches the module according to claim 51, wherein said multicore wiring is a printed flexible circuit (wiring harness 4 is connected to non-waterproof connector CR3, see Fig. 1, par. 124-128; the wiring may be a ribbon cable or a flexible printed circuit, par. 126).

18. Claims 54-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bingle et al. (US PGPub 2006/0171704) in view of DeLine et al. (US Patent 6,420,975).

Regarding claim 54, Bingle et al. teach the module according to claim 41. However, Bingle et al. do not teach wherein said connection means with the exterior, for the supply and/or the bidirectional signal exchange, are materialized in the form of an emitter/receptor of electromagnetic waves.

DeLine et al. teach a camera system for use on a vehicle wherein the camera unit communicates with the rest of the system via a wireless connection (col. 26 lines 56-63). An obvious advantage of using a wireless connection is that it simplifies the design of the camera cabling in that it obviates the need for conductors for the video signal. Further, it simplifies the connection of the camera to the vehicle video system.

Therefore, it would be obvious to one of ordinary skill in the art to combine the wireless connection of DeLine et al. with the camera device of Bingle et al. so that the camera cabling could be simplified. This would reduce the cost of the camera cabling.

Regarding claim 55, Bingle et al. in view of DeLine et al. teaches the module according to claim 54, wherein said emitter/receptor of electromagnetic waves is a radio signal emitter/receptor (DeLine et al.: the wireless connection is a radio-frequency transmission, col. 26 lines 56-63).

Regarding claim 56, Bingle et al. in view of DeLine et al. teaches the module according to claim 54, wherein said emitter/receptor of electromagnetic waves is an

infra-red ray signal emitter/receptor (DeLine et al.: the wireless connection is an infrared transmission, col. 26 lines 56-63).

19. Claim 58 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bingle et al. (US PGPub 2006/0171704) in view of Camus et al. (US Patent 6,594,399).

Regarding claim 58, Bingle et al. teach the module according to claim 57. However, Bingle et al. do not teach wherein said integrated circuit is an A.S.I.C.

Camus et al. teach a camera module comprising an ASIC (see Fig. 1, col. 2 line 62 to col. 3 line 7). As is well known in the art, ASIC stands for application specific integrated circuit and simply means a custom IC. In other words, the IC is custom designed for a particular application as opposed to a general IC that is intended to be used in many diverse applications. The well known benefit of an ASIC is that because the ASIC is designed for a specific application, it can be optimized for that particular application.

Therefore, it would be obvious to one of ordinary skill in the art to combine the ASIC of Camus et al. with the camera device of Bingle et al. so that the camera processing could be optimized for the particular camera application. This would increase the efficiency of the camera processing.

Allowable Subject Matter

20. Claims 43, 48, and 63-66 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Williams (US PGPub 2002/0113873) teaches an image acquisition module for monitoring applications of the external surroundings of a vehicle (rear vision system for large vehicles, see abstract), comprising: a housing with an interior protected against at least moisture (camera assembly 26 comprises a housing 52, par. 23) and a window closed by a transparent element (camera assembly 26 comprises a shield 62 constructed of clear plastic to enclose the rear face of the camera housing 62 and protect the camera and its lens, par. 23); an electronic circuit accommodated in said housing (video camera 54 is located inside housing 52, see Fig. 5) and associated with connection means with the exterior, for supply and/or bidirectional signal exchange (the video camera 54 is connected to and controlled by the cab mounted display assembly 24, par. 19, 22; therefore, the camera 54 must comprise some connection means for sending signals to and from the video camera 54); an image detector connected to said electronic circuit and opposed to said window (video camera 54 is disposed behind transparent shield 62, see Fig. 5); a support attached to the housing to carry an optic

system between said image detector and said window (video camera 54 comprises a lens, par. 23); and positioning means and releasable fixation means to enable at least the focusing of said optic system (video camera 54 comprises a lens, par. 23; the video camera 54 can be focused, par. 22) and the releasable fixation of the module to an external structure of a vehicle (the camera unit is detachably mounted to the trailer with clamps, par. 25), wherein said window is associated with at least one device protecting it from external agents (the transparent shield 62 is associated with wiper means 58, par. 23) and from a luminous incidence, providing an appropriate light pass through said transparent element (the transparent shield 62 is associated with defogging means 60, par. 23).

Kameyama (US PGPub 2002/0101041) teaches an image acquisition module for monitoring applications of the external surroundings of a vehicle (camera module used on a large-size automobile such as a passenger car or a bus, par. 69, 134, 289), comprising: a housing with an interior protected against at least moisture (camera casing 3 is waterproof, par. 71, 74, 148, 151, 157, 170, 176, 239) and a window hermetically closed by a transparent element (the cover 10 comprises a rectangular window 10f of transparent resin or glass secures the field of view of the camera and maintains air-tightness of the camera housing 10, par. 151, 236, 239, 240); an electronic circuit accommodated in said housing and associated with connection means with the exterior (printed circuit board 2 is inside the camera casing 3 and comprises an electrical connector, par. 103, 104), for supply and/or bidirectional signal exchange (rubber plug 7 comprises male terminals 5 that interface with mating connector 8 which

is attached to wiring harness 4, see Fig. 1); an image detector connected to said electronic circuit and opposed to said window (CCD camera 1 is disposed behind rectangular window 10f in which is mounted a plate of transparent resin or glass, see Fig. 2, par. 76-78, 236); a support attached to the housing to carry an optic system between said image detector and said window (lens 1c is positioned between the CCD and the window by lens periphery portion 1d, see Fig. 2); and positioning means and releasable fixation means to enable at least the releasable fixation of the module to an external structure of a vehicle (camera casing 3 is releasably attached to mating connector 8 and wiring harness 4 via lock arm 20 and lock arm receiving portion 34, see Fig. 2), wherein said window is associated with at least one device protecting it from a luminous incidence, providing an appropriate light pass through said transparent element (rectangular window 10f secures the field of view of camera 1 and is associated with cover 10, see Fig. 2; that is, subject light passes through the window 10f and impinges on the CCD camera 1 whereas light does not pass through the rest of cover 10).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DENNIS HOGUE whose telephone number is (571) 270-5089. The examiner can normally be reached on Mon. - Thurs., 8:00 AM - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye can be reached on (571) 272-7372. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lin Ye/

Supervisory Patent Examiner, Art Unit 2622

DH

Examiner

8/7/2009